1:Haskins K-4,5 (1952-1954)1956 SO11 Bahia Brazilians SO11

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[12]Teixeira, in his "Solos do Recôncavo da Bahia," pp. 36 and 38, gives the following data (here summarized) for the soils of Paranagua, near Rio Fundo in the município of Santo Amaro:

	Per cent		Per cent
Clay	28 - 48	Total Nitrogen	0.224
Lime	19 - 34	Exchangeable Calcium ME	44.8
Fine Sand	23 - 41	Exchangeable Magnesium ME	6.8
Coarse Sand	1.6- 6.5	Clorides	0.011
Residual Humidity	2.6- 5	Phosphorus	0.055
Rock	3.6- 10.7	Potassium Cloride	0.585
Water Capacity	40 - 58	Sodium Cloride	1.1577

[13]The Rio Pojuca has a gradient of 1-1351 from Catuiçara in northern Santo Amaro to the cidade of Pojuca, near the point at which the river enters the crystalline. The Rio Traripe has a gradient of about 1-125 for its last 10 km. before entering the Bay. Its valley is deeply incised, with deep gullies on the slopes.

[135] [14]These rock fragments, usually much weathered, almost invariably were identified as either gneiss or granite in the exposures observed in the field.

[15]Teixeira, op. cit., pp. 31-39.

[16]Bondar, op. cit., p. 256.

[17]One of the islands of the group pendant to the middle of the north coast.

[171] [18]Thus this part of Brazil is not like many areas in the United States, where relatively uniform cultivation practices are conspicuously minimizing soils differences.

[114] [19]According to the Köppen system of classification the coastal Recôncavo has an Af (tropical rainforest) climate, and the interior an Aw (tropical savanna) climate. According to the Thornthwaite system, all of the Recôncavo has a CA'w (subhumid tropical with winter rainfall deficiency) climate. Glen T. Trewartha, An Introduction to Climate (New York: McGraw-Hill, 1954), plates II and III.

[20]Gilberto Freyre, Nordeste (Rio de Janeiro: José Olympio Livraria Editora, 1937), pp. 9, 21.

132 127 [21]Official data from government weather stations was available for only four places in the Recôncavo--Salvador and São Bento das Lajes, in the município of São Francisco, on the littoral of the Bay; and Cruz das Almas and São Gonçalo in the western interior. Of these, only Salvador had maintained a continuous record over a relatively long period--including the years immediately preceeding the field study. There were a number of stations in adjacent parts of the state of Bahia, but none were close enough to the Recôncavo to be reliable guides to its climatic pattern.

The data upon which the climatic analysis of this study was based came from three basic sources: (1) Ministério da Agricultura, Departamento Nacional da Produção Mineral, Divisão de Águas Secção de Hidrologia, Atlas Pluviométrico do Brasil 1[illegible]-1938 (Boletim #5. Rio de Janeiro: Departamento Nacional da Produção Mineral, Divisão de Águas Secção de

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APPENDIX B

Geologic Structure

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135 The Archaean granites, gneisses, schists, and metamorphics are the most common surface rocks in eastern Bahia, where they form part of the so-called crystalline peneplain of Northeast Brazil. The Baía de Todos os Santos and the sedimentary lowlands and uplands north of the Bay occupy a rift in the crystalline platform which extends northward beyond the borders of the state. This rift runs through the center of the Recôncavo and is occupied in the south by an arm of the sea and in the north by sedimentary rock. On each side are crystalline zones, extending far beyond the Recôncavo to the west, but limited on the east by the sea.

[134] In the rift zone the upland deposits primarily are Tertiary, but where erosion has cut deeply, as it has north of the Bay and in major valleys such as that of the Rio Inhambupe, the underlying Cretaceous material has been exposed.

In a few places on the crystalline platform, especially south of the Rio Paraguaçu, there are small remnants of the Tertiary sediments.

Sugar cane has proved to grow especially well with the combination of warmth, rain, and massapê, and the soil has been producing the same crop for almost four hundred years. The area of massapê is sharply defined, for at its farthest edges the land rises to the regions of sandy scrub forest and desert which characterize what has been called the "other northeast"[2] or the sertão.

The surface of the sugar-Recôncavo is characterized by rolling fields cut by shallow valleys. Although the massapê is not subject to erosion, the other soils, where exposed, are. During the rainy winter season much damage is done, especially to the roads, which for the most part follow the non-massapê soils. Underneath the soil of the sugar-Recôncavo there are recently discovered oil deposits. The quantity of oil has not yet been determined, for the explorations are still going on. However, the national government has already begun to exploit the oil, which is close to the surface. Under Brazilian law, subsoil resources belong to the national government and not to the owner of the lands. As a result there has been a small-scale invasion of petroleum workers on the privately owned lands of the sugar-cane planters. To date, this has not interrupted the agricultural routine to any great extent, at least not in Vila Recôncavo. In Conselho (see map of community), where the drilling was first started, the government bought the land from the individuals and the sugar mill corporation owning it and has turned once green fields of sugar cane into bare fields, spotted here and there with oil wells. The former agriculturalists have had to leave the area or become laborers in the oil camps and refinery.

The Recôncavo is one of the most densely populated regions in Brazil. It is an area of 6,500 square kilometers, with a population of 683,000 in 1940, distributed in 14 counties including the capital. It has an average density of 106 inhabitants per square kilometer,[3] in comparison with the average density of the state of Bahia, which is 7 persons per square kilometer, and with the national average of 5 persons per square kilometer.[4] It must be remembered that these figures include

[TEXT CONTINUED ON PAGE 13]

2. Preston James, Latin America (New York, 1942), p. 411.

3. Aroldo de Azevedo, "Recôncavo da Bahia," Revista da Universidade de São Paulo, I (1950), 14.

4. T. Lynn Smith, Brazil (Baton Rouge, 1947), p. 131.

4: Pierson Z-4, 5 (1935-1937) 1967
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[City of Salvador]

In the lower city lies, of course, the port, with its customs, warehouses, shipping and consular offices, banks, the marine arsenal, the post office, the Association of Commerce, the principal public market, jewelry shops, hardware and cigar stores, and most of the men's shops of the city. Up on the promontory and extending out toward the suburbs are the public buildings and most of the churches, the convents and monasteries, hotels and movie theaters, the public library, museums, professional schools, primary and secondary institutions, hospitals, women's shops, photographic galleries, furniture and dry-goods stores, confectionary stalls, the "five and tens," physicians' and dentists' offices, clubs, the principal parks and *praças*, and the residential areas of the city.

Bahia the city is the economic and political capital of Bahia the state, whose area of 342,000 square miles makes it considerably larger than Texas. The region is composed in large part of a vast plain of gneiss formation which rises abruptly from the comparatively narrow coastal belt to heights varying from 600 to 1,200 feet in the interior. Upon this plateau and running north and south across the central portion of the state lie a series of low mountains composed principally of sedimentary rock, sandstone, or conglomerates and containing such minerals as iron, manganese, copper, lead, gold, and diamonds (including the black *carbonado* so essential for tool-cutting). This mountain barrier acts as a valuable condenser, gathering moisture for a land which otherwise might be virtually desert. In the extreme western part of the state the plateau is composed of sandstone overlying limestone, and thus it provides a natural sponge which assures perennial rivers in a region where light rains and near drought alternate in six-month periods.